

WHAT IS CLAIMED IS:

1. A method of sharing a printer between a plurality of users on a computer network, said method comprising the steps of:
 - attaching host-based networking hardware to the printer;
 - providing a network communication protocol defining a command channel
 - 5 and a data channel;
 - allowing only one of the users to own the data channel at any single point in time; and
 - instructing the host-based networking hardware to accept information on the data channel only from the user that owns the data channel.
2. The method of claim 1, wherein the host-based networking hardware disregards all said information received on the data channel from any of the users that do not own the data channel.
3. The method of claim 1, wherein the host-based networking hardware responds to a command on the command channel from any of the users.
4. The method of claim 3, wherein the host-based networking hardware responds with a status response.
5. The method of claim 4, wherein the status response indicates the user that owns the data channel.
6. The method of claim 1, wherein the user that owns the data channel can release the data channel by sending one of a close signal and a terminate signal on the command channel to the host-based networking hardware.
7. The method of claim 6, wherein a print job is aborted in response to the terminate signal.
8. The method of claim 6, wherein a user that does not own the data channel can acquire the data channel by sending a connect signal on the command channel to the host-based networking hardware.
9. The method of claim 1, wherein the network communication protocol defines a communication frame having at least one of a destination address field, a source address field, a frame identifier field, a command/data definition field, and a payload field.

10. The method of claim 9, comprising the further step of sending the communication frame from the user that owns the data channel to the host-based networking hardware.

11. The method of claim 10, wherein the host-based networking hardware sends an acknowledgement of receiving the communication frame to the user that owns the data channel.

12. The method of claim 10, wherein the communication frame has a frame number and a sequence number, the host-based networking hardware discarding any said communication frame that does not have an expected said sequence number.

13. The method of claim 12, wherein, in response to receiving said communication frame that does not have said expected sequence number, the host-based networking hardware sends an acknowledgement including the frame number of a last successfully received communication frame to the user that owns the data channel.

14. The method of claim 10, wherein a timeout occurs when the host-based networking hardware does not receive said communication frame within a predetermined time period.

15. The method of claim 14, wherein the host-based networking hardware aborts a print job after a third said timeout.

16. The method of claim 15, wherein the host-based networking hardware releases the data channel after the print job is aborted.

17. A method of sharing a network appliance between a plurality of users on a computer network, said method comprising the steps of:

providing a network communication protocol defining a command channel and a data channel;

5 allowing only one of the users to own the data channel at any single point in time; and

instructing the network appliance to accept information on the data channel only from the user that owns the data channel.

18. A method of sharing a network appliance between a plurality of users on a computer network, said method comprising the steps of:

using one of the users to transmit a data frame into the computer network;

receiving the data frame with said network appliance;

- 5 determining whether a first portion of the data frame includes a unique, predetermined sequence of data;
- reading and processing a second portion of the data frame if the first portion of the data frame includes the predetermined sequence of data; and
- discarding the data frame without reading and processing the second portion
- 10 of the data frame if the first portion of the data frame does not include the predetermined sequence of data.
19. The method of claim 18, wherein the data frame has an Ethernet format.
20. The method of claim 18, wherein the first portion of the data frame comprises an initial portion of the data frame.
21. The method of claim 18, wherein said determining step is performed in real time without storing the data frame in a memory.
22. The method of claim 18, wherein the network appliance comprises a printer.
23. The method of claim 18, wherein said determining step is performed exclusively with hardware.